

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Docket No: MP0246

Ke HAN

Express Mail No. EU782142571US

Filed: Concurrently herewith

For: **OPTIMAL ONE-SHOT PHASE AND FREQUENCY ESTIMATION FOR TIMING ACQUISITION**

**INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. §§ 1.97 and 1.98**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents which are listed on the attached PTO/SB/08 A & B (modified) form and which the Examiner may deem material to patentability of the claims of the above-identified application.

One copy of each of the listed documents is submitted herewith.

The present Information Disclosure Statement is being filed concurrently with the application and therefore, no Statement under 37 C.F.R. § 1.97(e) or fee under 37 C.F.R. § 1.17(p) is required.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not

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waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

Respectfully submitted,



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PATENT TRADEMARK OFFICE

Date: July 16, 2003

**Substitute for Form 1449 A & B/PTO**

## **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(use as many sheets as necessary).

Sheet

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*Complete if Known*

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|------------------------|---------------|
| Application Number     |               |
| Confirmation Number    |               |
| Filing Date            | July 16, 2003 |
| First Named Inventor   | Ke HAN        |
| Art Unit               |               |
| Examiner Name          |               |
| Attorney Docket Number | MP0246        |

| U.S. PATENT DOCUMENTS |                       |                 |                                      |   |
|-----------------------|-----------------------|-----------------|--------------------------------------|---|
| Examiner Initials*    | Cite No. <sup>1</sup> | Document Number |                                      | Name of Patentee or Applicant of Cited Document |
|                       |                       | Number          | Kind Code <sup>2</sup><br>(if known) |   |
|                       |                       | US 5,619,537    |                                      | Altes   |
|                       |                       | US 6,064,703    |                                      | Cusani et al.                                   |
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|                       |                       | US 2002/0167923 | A1                                   | Sendonaris et al.                               |
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|                       |                       | US              |                                      |   |
|                       |                       | US              |                                      |   |

| OTHER ART - NON PATENT LITERATURE DOCUMENTS |                       |  |                          |
|---|-----------------------|--|--------------------------|
| Examiner Initials*                          | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published. | Translation <sup>6</sup> |
|   |                       | BERGMANS, Jan W.M., "Appendix 9C: Data-aided Maximum-likelihood one-shot phase estimator", <i>Digital Baseband Transmission and Recording</i> , 1996, pp. 489-494, Kluwer Academic Publishers, Netherlands.  |                          |
|   |                       | LIU, Jingfeng et al., "Symbol Timing Recovery for Low-SNR Partial Response Recording Channels," <i>Globecom Conference</i> , 2002, 8 pp. Pittsburgh, Pennsylvania.   |                          |
|   |                       |  |                          |
|   |                       |  |                          |
|   |                       |  |                          |

**Examiner Signature** \_\_\_\_\_ **Date Considered** \_\_\_\_\_

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov), MPEP 901.04 or in the comment box of this document. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to indicate here if English language Translation is attached.